# Daily hassles reported by Chronic Fatigue Syndrome and Fibromyalgia patients in tertiary care

van den Houdenhove, B.; Neerinckx, E.; Onghena, P.; Vingerhoets, A.J.J.M.; Lysens, R.; Vertommen, H.

*Published in:*
Psychotherapy and Psychosomatics

*Publication date:*
2002

*Document Version*
Publisher's PDF, also known as Version of record

Regular Article

Psychotherapy and Psychosomatics

Psychother Psychosom 2002;71:207–213

# Daily Hassles Reported by Chronic Fatigue Syndrome and Fibromyalgia Patients in Tertiary Care: A Controlled Quantitative and Qualitative Study

Boudewijn Van Houdenhove[a] Eddy Neerinckx[b] Patrick Onghena[c]
Ad Vingerhoets[d] Roeland Lysens[a] Hans Vertommen[c]

[a]Faculty of Medicine, K.U. Leuven, Leuven, [b]Provinciale Hogeschool, Hasselt, and [c]Faculty of Psychology and Educational Sciences, K.U. Leuven, Leuven, Belgium; [d]Department of Psychology, K.U. Brabant, Tilburg, The Netherlands

Key Words
Chronic fatigue syndrome · Fibromyalgia · Daily hassles · Stress · Anxiety · Depression · Psychotherapy

Abstract

***Background:*** This study aimed at providing insight in the frequency, emotional impact and nature of daily hassles, experienced by patients suffering from chronic fatigue syndrome (CFS) and/or fibromyalgia (FM), compared with patients with a chronic organic disease. ***Methods:*** One hundred and seventy-seven CFS/FM patients, 26 multiple sclerosis (MS) and 26 rheumatoid arthritis (RA) patients were investigated within 2–6 months after diagnosis. All patients completed a self-report questionnaire assessing daily hassles and associated distress, a visual analogue scale assessing fatigue and pain and a depression and anxiety questionnaire. ***Results:*** CFS/FM patients show a higher frequency of hassles, higher emotional impact and higher fatigue, pain, depression and anxiety levels compared with MS/RA patients. Three hassle themes dominate in the CFS/FM group: dissatisfaction with oneself, insecurity and a lack of social recognition. In contrast, hassles reported by MS/RA patients show a much larger diversity and are not focused on person-dependent problems. ***Conclusions:*** Patients recently diagnosed as suffering from CFS and/or FM are highly preoccupied and distressed by daily hassles that have a severe impact on their self-image, as well as their personal, social and professional functioning. An optimal therapeutic approach of CFS and FM should take account of this heavy psychosocial burden, which might refer to core themes of these patients' illness experience.



## Introduction

Chronic fatigue syndrome (CFS) and fibromyalgia (FM) still remain ill-defined and badly understood conditions, characterised by physical and mental fatigue, diffuse muscle and joint pain, effort intolerance, headache, sleep disturbances and signs of mild immunological dysfunction [1, 2]. Symptoms and non-symptomatic charac-

KARGER

Fax + 41 61 306 12 34
E-Mail karger@karger.ch
www.karger.com


0033–3190/02/0714–0207$18.50/0

Accessible online at:
www.karger.com/journals/pps

Prof. B. Van Houdenhove
UZ Pellenberg, Weligerveld 1
B–3212 Lubbeek (Belgium)
Tel. +32 16 338761, Fax +32 16 338703
E-Mail Boudewijn.VanHoudenhove@uz.kuleuven.ac.be

teristics of both illnesses are thought to be largely overlapping [3–5], although their pathophysiological basis may differ [6].

It has been hypothesised, from a psychological as well as from a neurobiological point of view, that the syndromes may be 'stress related' [7–9]. This hypothesis is, on the one hand, based on the fact that negative life events (often combined with a viral infection or a physical trauma) [10–13], victimisation experiences [14, 15] and the mental or physical stress of an overactive lifestyle [16, 17] have been found to be frequently associated with the development of CFS/FM. On the other hand, there is ample evidence that CFS and FM patients are confronted with severe psychosocial stress related to coping and adaptation problems, a lack of comprehension by the environment and uncertainties surrounding the nature and prognosis of their condition [18–21].

Interestingly, negative life events have been found to exacerbate CFS symptoms [22] and worsen the prognosis of FM [23]. This suggests that antecedent psychosocial or physical stress could increase vulnerability for subsequent (reactive or other) stressors, which in turn could influence disease activity and/or disability [7–9].

Furthermore, neurobiological investigations have repeatedly shown hypothalamo-pituitary-adrenal axis functioning to be perturbed in CFS as well as FM, implying a lack of reactivity of this axis and resulting in decreased cortisol secretion [24–26].

Finally, psychosocial stress may not only be linked with major life events, but with minor events as well. Such 'daily hassles' or 'everyday problems' can cause considerable worry and concern and, by their chronic and accumulating character, may be as stressful as a major negative event [27]. In FM patients, higher levels of daily hassles have been found compared with rheumatoid arthritis (RA) patients and pain-free controls [28, 29]. To the best of our knowledge, however, this type of chronic life stress has not yet been empirically investigated in CFS.

In the present study, we evaluated the frequency, emotional impact and nature of daily hassles, as well as fatigue, pain, depression and anxiety experienced by recently diagnosed CFS and FM patients. Data of the CFS/FM group were compared with those of a control group consisting of recently diagnosed multiple sclerosis (MS) and RA patients, i.e., two well-defined organic conditions that are characterised by chronic fatigue and pain as well. Frequency and emotional impact of hassles were additionally calculated for women and men.

## Materials and Methods

*Subjects and Setting*

Participants were recruited from a multidisciplinary clinic for patients with chronic fatigue and/or widespread pain belonging to the departments of General Internal Medicine and Rheumatology of the University Hospital Leuven, Belgium.

The experimental group consisted of 177 consecutive patients (149 women and 28 men) meeting the Fukuda criteria for CFS [30] and/or the ACR criteria for FM [31]. One hundred and ten patients received 'CFS' as a primary diagnosis, while 67 were diagnosed as suffering from 'FM'; however, since about 80% of the patients fulfilled both sets of diagnostic criteria, we decided to consider the two groups together.

The control group consisted of 26 MS and 26 RA patients (41 women and 11 men), consulting at the National Multiple Sclerosis Clinic and the Rheumatology Department of our hospital, respectively. All control patients complained of fatigue and pain, but showed no visible signs of disease. The latter inclusion criterion was intended to make the experimental and the control group as comparable as possible with regard to physical functioning, and avoid differences in social contacts due to overt disease characteristics.

CFS/FM patients were investigated during a consultation that took place within 2 months after the diagnosis was made. MS/RA patients were investigated within 6 months after diagnosis. They all filled in a visual analogue scale measuring fatigue and pain, as well as the 'Everyday Problem Checklist' (EPCL), the Beck Depression Inventory (BDI) and the State Trait Anxiety Inventory (STAI) self-report questionnaires (see below).

Mean symptom duration was assessed via the patients' medical records. It was 35.5 months in CFS/FM patients (SD = 44.1) and 50.4 months in MS/RA patients (SD = 49.1), which is significantly different, $t(227) = 2.09$; $p = 0.038$. Patient characteristics are summarised in table 1.

*Psychometric Instruments*

Daily hassles were assessed using the EPCL, a Dutch self-report questionnaire which has been proved to be sufficiently reliable and valid [32]. The questionnaire, containing 114 items, focuses on a large diversity of common life problems, with regard to personal functioning, family life, social life, housing conditions, finances, professional life, confrontations, social developments and general stress situations. The questions have to be answered by 'yes' or 'no', and the associated distress (or emotional impact) can be indicated on a scale from 0 to 3.

The EPCL questionnaire provides scores on three *frequency* subscales, i.e., general frequency (FREQ), frequency of person-dependent problems (DEP-FREQ) and frequency of person-independent problems (INDEP-FREQ); in the same vein, there are three *total distress* scores (TOT, DEP-TOT and INDEP-TOT), and three *mean intensity per item* scores (INT, DEP-INT and INDEP-INT).

Depression was assessed by the BDI [33], and anxiety by the STAI [34].

*Data Analysis*

Descriptive statistics, frequency analyses and statistical tests were performed using SAS [35]. For the comparison of means between the two groups, separate-variance and pooled-variance Student t tests were performed. For the tests of association between categorical variables, $\chi^2$ tests were used and Cramér contingency coefficients (C)

Table 1. Characteristics of the CFS/FM and MS/RA patient groups

| | CFS/FM | MS/RA | p |
|---|---|---|---|
| Number of patients | 177 | 52 | |
| Gender (m/f), % | 16/84 | 21/79 | n.s. |
| Mean age, years | 37.8 (8.6) | 40.4 (9.4) | n.s. |
| Unemployed, % | 14 | 8 | n.s. |
| Housewife, % | 19 | 13 | n.s. |
| Blue collar, % | 30 | 27 | n.s. |
| White collar, % | 37 | 52 | n.s. |
| Single/with partner, % | 18/82 | 21/79 | n.s. |
| Having children (yes/no), % | 68/32 | 62/38 | n.s. |
| Mean duration of symptoms, months | 35.5 (44.1) | 50.4 (49.1) | <0.05 |

The figures in parentheses are SD.

Table 2. Comparison of mean EPCL subscale scores between CFS/FM and MS/RA patients

| | CFS/FM | MS/RA | *t* |
|---|---|---|---|
| FREQ mean | 28.4 (16.7) | 20.7 (14.7) | 2.97** |
| DEP-FREQ mean | 7.1 (4.6) | 5.0 (4.3) | 3.04** |
| INDEP-FREQ mean | 5.0 (3.3) | 4.0 (2.4) | 2.04* |
| TOT mean | 50.3 (36.9) | 29.3 (25.5) | 4.67*** |
| DEP-TOT mean | 13.1 (10.0) | 6.8 (7.2) | 4.23*** |
| INDEP-TOT mean | 8.2 (7.1) | 5.9 (4.4) | 2.79** |
| INT mean | 1.7 (0.6) | 1.4 (0.5) | 3.60*** |
| DEP-INT mean | 1.7 (0.8) | 1.2 (0.8) | 4.12*** |
| INDEP-INT mean | 1.5 (0.8) | 1.4 (0.7) | 0.58 n.s. |

The figures in parentheses are SD.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

were calculated [36]. In order to obtain optimal statistical power for answering our main research question, the data for the MS and RA group were pooled. Three-group analyses of variance confirmed that there were no differences between the MS and RA group on any of the parameters.

## Results

### *Quantitative Group Comparisons*

The CFS/FM group significantly differs from the MS/RA group on nearly all EPCL subscales. As can be seen in table 2, CFS/FM patients report a statistically significantly larger number of daily hassles in general, as well as for the person-dependent and the person-independent hassles separately ($p < 0.05$). For each of these variables, the accompanying total distress and mean intensity per item scores are also significantly higher for the CFS/FM patients, with the exception of the mean intensity per item scores for the person-independent hassles where there was no statistically significant difference between CFS/FM and MS/RA patients [$t(227) = 0.58$, $p = 0.5625$ two-tailed].

With regard to somatic symptoms, fatigue and pain show higher mean levels in CFS/FM patients than in MS/RA patients [$t(227) = 11.85$, $p < 0.0001$ and $t(227) = 6.49$, $p < 0.0001$, respectively] (table 3).

With regard to affective symptoms, CFS/FM patients are more depressed [$t(227) = 6.19$, $p < 0.0001$] and show more state anxiety [$t(227) = 4.39$, $p < 0.0001$] and trait anxiety [$t(227) = 4.42$, $p < 0.0001$] than MS/RA patients (table 3).

Table 3. Comparison of mean scores of fatigue, pain and affective symptoms between CFS/FM and MS/RA patients

| | CFS/FM | MS/RA | *t* |
|---|---|---|---|
| Fatigue mean | 7.5 (1.1) | 5.3 (1.6) | 11.85**** |
| Pain mean | 5.7 (2.7) | 3.0 (2.4) | 6.49**** |
| BDI mean | 18.0 (8.8) | 9.6 (7.9) | 6.19**** |
| STAI-State mean | 47.0 (13.4) | 37.6 (14.1) | 4.39**** |
| STAI-Trait mean | 47.6 (10.8) | 40.1 (10.6) | 4.42**** |

The figures in parentheses are SD.
**** $p < 0.0001$.

It can additionally be mentioned that female CFS/FM patients score higher than male patients on nearly all EPCL subscales ($p < 0.05$), with the exception of the mean intensity per item subscales (table 4). This is in accordance with similar sex differences found in a healthy population and other clinical populations [32].

### *Qualitative Group Comparisons*

Looking into more detail to FREQ scores of the EPCL scale, the following person-dependent items are mentioned by more than 50% of the CFS/FM patients: *'you failed to accomplish tasks that you thought you were capable of doing'*, *'your sleep was disturbed'*, *'you were in a state of insecurity'*, *'certain people did not consider your feelings'* and *'something brought back unpleasant memories'*.

Table 4. Comparison of mean EPCL subscale scores between female and male CFS/FM patients

| | CFS/FM | | *t* |
|---|---|---|---|
| | females n = 149 | males n = 28 | |
| FREQ mean | 29.8 (17.3) | 20.9 (10.6) | 2.63** |
| DEP-FREQ mean | 7.5 (4.8) | 5.0 (3.0) | 2.66** |
| INDEP-FREQ mean | 5.2 (3.5) | 3.7 (1.8) | 2.21* |
| TOT mean | 53.7 (38.1) | 32.9 (23.4) | 2.79** |
| DEP-TOT mean | 13.9 (10.4) | 8.9 (6.3) | 2.48* |
| INDEP-TOT mean | 8.8 (7.5) | 5.0 (3.5) | 2.62** |
| INT mean | 1.7 (0.6) | 1.5 (0.5) | 1.66 n.s. |
| DEP-INT mean | 1.8 (0.8) | 1.5 (0.8) | 1.82 n.s. |
| INDEP-INT mean | 1.5 (0.8) | 1.3 (0.7) | 1.24 n.s. |

The figures in parentheses are SD.
* $p < 0.05$, ** $p < 0.01$.

Table 5. Qualitative comparisons of total distress scores between CFS/FM and MS/RA patients

| | | |
|---|---|---|
| TOT personal functioning | CFS/FM > MS/RA | (p = 0.0005) |
| social life | CFS/FM > MS/RA | (p = 0.0008) |
| professional life | CFS/FM > MS/RA | (p = 0.0009) |
| confrontations | CFS/FM > MS/RA | (p = 0.0071) |
| general stress | CFS/FM > MS/RA | (p = 0.01) |
| social developments | MS/RA > CFS/FM | (p = 0.0001) |

Table 6. Correlations between duration of symptoms and EPCL subscales in CFS/FM and MS/RA patients

| | CFS/FM | MS/RA |
|---|---|---|
| Duration (<12 vs. >12 months) | ~ no EPCL-subscales | ~ FREQ**** DEP-FREQ*** ~ TOT* DEP-TOT* |

~ = Correlates with; * $p < 0.05$, *** $p < 0.001$, **** $p < 0.0001$.

In contrast, among MS/RA patients, only one person-independent item is mentioned by more that 50%: *'certain items in the news concerned you'*, whereas all other items are mentioned at much lower frequencies.

Comparing TOT scores of CFS/FM patients with those of the control group (table 5), CFS/FM patients show higher distress for personal functioning [$t(227) = 3.54$; $p = 0.0005$], characterised by the following items: *'you failed to accomplish tasks that you thought you were capable of doing'* [$\chi^2(4) = 19.93$; C = 0.30; $p = 0.0005$], *'you were in a state of insecurity'* [$\chi^2(4) = 17.05$; C = 0.27; $p = 0.0019$], *'you could not be yourself'* [$\chi^2(3) = 12.73$; C = 0.24; $p = 0.0053$] and *'you were dissatisfied with your looks'* [$\chi^2(4) = 10.92$; C = 0.22; $p = 0.028$].

CFS/FM patients are also more distressed in social life [$t(120.8) = 3.44$; $p = 0.0008$], illustrated by: *'you had to bid farewell to a good colleague, friend or acquaintance due to a change of job, a move or a trip'* [$\chi^2(4) = 14.60$; C = 0.25; $p = 0.0056$], *'people around you did not respect you'* [$\chi^2(4) = 11.62$; C = 0.23; $p = 0.020$] and *'certain people did not consider your feelings* [$\chi^2(4) = 9.67$; C = 0.21; $p = 0.046$].

Furthermore, CFS/FM patients experience more distress in professional life [$t(118.3) = 3.42$; $p = 0.0009$], illustrated by: *'you were not able to complete a certain task to your satisfaction'* [$\chi^2(4) = 11.252$; C = 0.22; $p = 0.021$], in confrontations [$t(125.8) = 2.74$; $p = 0.0071$], illustrated by: *'you were confronted with preconceptions or discrimination'* [$\chi^2(3) = 8.02$; C = 0.22; $p = 0.021$], and in general stress situations [$t(119.7) = 3.08$; $p = 0.01$], illustrated by: *'certain developments did not proceed according to plan'* [$\chi^2(4) = 10.43$; C = 0.21; $p = 0.034$].

It may be concluded that the majority of CFS/FM patients feel deeply frustrated and insecure about their own functioning as well as their social and professional relationships. In contrast, MS/RA patients are only significantly more distressed by social developments [$t(227) = 3.99$; $p = 0.0001$], illustrated by person-independent items such as: *'you did not approve of certain political developments or decisions'* [$\chi^2(4) = 23.32$; C = 0.34; $p = 0.00001$] and *'certain events in the news concerned you'* [$\chi^2(4) = 18.64$; C = 0.29; $p = 0.0009$].

### *Correlations between Daily Hassles and Duration of Symptoms*

In CFS/FM patients, the subgroup of CFS/FM patients with symptoms existing less than 12 months and the subgroup with symptoms existing for a longer period do not show any difference on the EPCL subscales. In contrast, MS/RA patients with a longer duration of symptoms (12 months and more) show a higher FREQ, $t(38.3) = 4.51$,

p = 0.0001 and DEP-FREQ, $t(40.9) = 3.71$, p = 0.0006, as well as a higher TOT, $t(35.9) = 3.55$, p = 0.0011 and DEP-TOT $t(30.9) = 2.81$, p = 0.0086 (table 6).

## Discussion

The main goal of the present study was to obtain insight into the frequency, emotional impact and nature of daily hassles in recently diagnosed CFS and FM patients, compared with patients with a recently diagnosed chronic organic disease.

It was found that CFS/FM patients struggle with significantly more hassles than the control group. CFS/FM patients' hassles are also associated with a higher degree of emotional distress. Additionally, female CFS/FM patients report more hassles than men and seem, to a certain degree, also more emotionally affected.

Moreover, the nature of CFS/FM patients' hassles is clearly different from those of the control group, i.e., they are much more person-dependent and mainly refer to 3 major themes: (1) dissatisfaction with oneself, (2) feelings of insecurity and (3) insufficient social recognition. In contrast, MS/RA patients mention hassles that are mainly person *in*dependent, more heterogeneous and comparable with the norm group of healthy subjects [32], with the exception of sleep disturbances. In fact, the triangle 'dissatisfaction – insecurity – lack of social recognition' is not present at all in MS/RA patients.

Finally, the frequency of daily hassles and associated distress increase with the duration of symptoms in MS/RA patients, while this increase is remarkably absent in CFS/FM patients.

Trying to interpret the above results, two possibilities arise. First, it could be that CFS/FM patients are more preoccupied with hassles related to personal deficiency because they have higher levels of fatigue and pain. Also, given the uncertainties surrounding their illness, CFS/FM patients could be more focused on hassles related to insecurity. However, the control group, despite experiencing fatigue and pain as well, and being confronted with – even greater – uncertainty about future loss of function, seems far less impressed by the person-dependent problems that are in the midst of CFS/FM patients' preoccupations.

Furthermore, CFS/FM patients' worries about social recognition could refer to their feeling 'not being taken seriously'. Many CFS and FM patients suffer indeed from incomprehension and dismissive reactions from their environment, while this is usually not the case in MS/RA patients. Nonetheless, symptoms of MS/RA may long be similarly vague, exposing at least some of them to disbelief as well.

A second interpretation, therefore, could be that CFS/FM patients – in contrast to MS/RA patients – fail to adapt to their daily worries and concerns because the latter might refer to the core of their illness experience. CFS/FM patients' preoccupations may, notably, reflect deep disappointment and frustration about their failed strivings for physical or mental achievement, as well as approval from others. Such strivings – which have been described as a central theme in the illness narratives of CFS/FM patients [37] – may be psychodynamically linked to personality factors, such as a vulnerable self-esteem [38–40], narcissistic or perfectionistic tendencies [41, 42] and, not uncommonly, early victimisation experiences [14, 15].

The manifestly higher levels of depression and anxiety in the CFS/FM group could fit into both interpretations. On the other hand, support for the second interpretation is provided by the fact that all CFS/FM patients show a similar amount of hassles and distress, irrespective of the duration of symptoms. In contrast, MS/RA patients with a longer duration of symptoms report more (and particularly more person-dependent) hassles and distress, suggesting that the latter may be linked to a deterioration of the illness. However, our results do not allow causal inferences, since the duration of symptoms largely goes beyond the period covered by the EPCL questionnaire.

In any case, these findings may have important therapeutic implications. They notably suggest that treatment approaches should pay sufficient attention to CFS/FM patients' struggle with a multitude of daily hassles that severely impact their self-image and lay a heavy burden on their personal, professional and social functioning. This would imply that psycho-educational, cognitive-behavioural and 'graded activity' treatments [43–45] should in many cases be complemented with experiential or psychodynamically-oriented therapeutic strategies [46, 47] – not only to support the patients' coping with symptoms and functional limitations, but also to help them adapt to changing ambitions and life goals.

## Limitations

The results of this study should be interpreted within the context of several methodological limitations.

First, all CFS and FM patients were seen in tertiary care, implying a selection bias that requires some caution in generalising the results to a broader patient population.

Second, despite the fact that all CFS/FM and MS/RA in our study were characterised by similar symptoms and lacked visible signs of disease, the associated disability in the two groups might have been different. Whether this could have influenced our results cannot be determined, since no disability measures were used.

Third, both groups were not investigated at exactly the same time after diagnosis. This could have biased our results because both groups might have been in a different stage of coping and adaptation (i.e., after 2 months, the patients could be in an emotional crisis, whereas after 6 months, this crisis might be less pronounced).

Finally, the differences in mean illness duration between the groups (35.5 vs. 50.4 months) and, as mentioned in the previous section, the higher levels of fatigue, pain, depression and anxiety in the CFS/FM group could be considered confounding factors as well.

## Conclusions

Within the above limitations, this study demonstrates that recently diagnosed CFS or FM patients are overwhelmed by person-dependent daily hassles and emotional distress, focused on dissatisfaction with themselves, feelings of insecurity and lack of social recognition. Although such experiences and concerns might be linked with personality factors increasing vulnerability to CFS and FM, prospective research is necessary to disentangle the complex cause/effect interactions between stress, symptoms and disability in these patients. Treatment should, in any case, pay sufficient attention to the severe personal, social and professional burden these patients are confronted with, to help them cope and facilitate long-term adaptation.

## Acknowledgments

The authors thank Drs. R. Westhovens and M.B. D'Hooghe for their help in the recruitment of patients. The present study was partly supported by the Fund for Scientific Research Vlaanderen, Belgium.

## References

1 Wessely S, Sharpe M, Hotopf M: Chronic Fatigue and Its Syndromes. Oxford, Oxford University Press, 1998.
2 Goldenberg D: Fibromyalgia syndrome a decade later: What have we learned? Arch Intern Med 1999;159:777–785.
3 Buchwald D: Fibromyalgia and chronic fatigue syndrome: Similarities and differences. Rheum Dis Clin North Am 1996;22:219–243.
4 Clauw DJ, Chrousos GP: Chronic pain and fatigue syndromes: Overlapping clinical and neuroendocrine features and potential pathogenic mechanisms. Neuroimmunomodulation 1997;4:134–153.
5 Wessely S, Nimnuan C, Sharpe M: Functional somatic syndromes: One or many? Lancet 1999;354:936–939.
6 Evengard B, Nilsson CG, Lindh G, Lindquist L, Eneroth P, Fredrikson S, Terenius L, Henriksson KG: Chronic fatigue syndrome differs from fibromyalgia. No evidence for elevated substance P levels in cerebrospinal fluid of patients with chronic fatigue syndrome. Pain 1998;78:153–155.
7 Cleare A, Wessely S: Chronic fatigue syndrome: A stress disorder? Br J Hosp Med 1996; 55:571–574.
8 Dobbins J, Natelson B, Brassloff R: Physical, behavioural and psychological risk factors for chronic fatigue syndrome: A central role for stress? J Chron Fat Syndr 1995;1:43–58.
9 Okifuji A, Turk DC: Fibromyalgia: Search for mechanisms and effective treatments; in Gatchel RJ, Turk DC (eds): Psychosocial Factors in Pain. Critical Perspectives. New York, Guilford, 1999, pp 227–246.
10 Theorell T, Blomkvist V, Lindh G, Evengard B: Critical life events, infections, and symptoms during the year preceding chronic fatigue syndrome (CFS): An examination of CFS patients and subjects with a nonspecific life crisis. Psychosom Med 1999;61:304–310.
11 Skapinakis P, Lewis G, Meltzer H: Clarifying the relationship between unexplained chronic fatigue and psychiatric mobidity: Results from a community survey in Great Britain. Am J Psychiatry 2000;157:1492–1498.
12 Eich W, Hartmann M, Müller A, Fischer H: The role of psychosocial factors in fibromyalgia syndrome. Scand J Rheumatol Suppl 2000;29: 30–31.
13 Anderberg UM, Marteinsdottir I, Theorell T, von Knorring L: The impact of life events in female patients with fibromyalgia and in female healthy controls. Eur Psychiatry 2000;15: 295–301.
14 Walker EA, Keegan D, Gardner G, Sullivan M, Katon W, Bernstein D, Katon WJ: Psychosocial factors in fibromyalgia compared with rheumatoid arthritis. II. Sexual, physical, and emotional abuse and neglect. Psychosom Med 1997;59; 572–577.
15 Van Houdenhove B, Neerinckx E, Lysens R, Vertommen H, Van Houdenhove L, Onghena P, Westhovens R, D'Hooghe B: Victimization in chronic fatigue syndrome and fibromyalgia in tertiary care: A controlled study on prevalence and characteristics. Psychosomatics 2001;421:21–28.
16 Van Houdenhove B, Neerinckx E, Onghena P, Hellin J: Does high 'action-proneness' make people more vulnerable to chronic fatigue syndrome? A controlled psychometric study. J Psychosom Res 1995;39:633–640.
17 Van Houdenhove B, Neerinckx E, Onghena P, Lysens R, Vertommen H: Premorbid 'overactive' lifestyle in chronic fatigue syndrome and fibromyalgia: An etiological factor or proof of good citizenship? J Psychosom Res 2001;51: 571–576.
18 Schweitzer R, Kelly B, Foran A, Terry D, Whiting J: Quality of life in chronic fatigue syndrome. Soc Sci Med 1995;41:1367–1372.
19 Knussen C, Lee D: Chronic fatigue syndrome: Symptoms, appraisal and ways of coping. Br J Health Psychol 1998;3:111–121.
20 Jason LA, Fricano G, Taylor RR, Halpert J, Fenell PA, Klein S, Levine S: Chronic fatigue syndrome: An examination of the phases. J Clin Psychol 2000;56:1497–1508.
21 Hallberg LRM, Carlsson SG: Coping with fibromyalgia. A qualitative study. Scand J Caring Sci 2000;14:29–36.

22 Lutgendorf SK, Antoni MH, Ironson G, et al: Physical symptoms of chronic fatigue syndrome are exacerbated by the stress of hurricane Andrew. Psychosom Med 1995;57:310–323.
23 Wigers SH: Fibromyalgia outcome: The predictive value of symptom duration, physical activity, disability pension, and critical life events – a 4.5 year prospective study. J Psychosom Res 1996;41:235–243.
24 Demitrack M, Crofford LJ: Evidence for and pathophysiological implications of hypothalamo-pituitary-adrenal axis dysregulations in fibromyalgia and chronic fatigue syndrome. Ann NY Acad Sci 1998;840:684–697.
25 Weigent DA, Bradley LA, Blalock JE, Alarcon GS: Current concepts in the pathophysiology of abnormal pain perception in fibromyalgia. Am J Med Sci 1998;315:405–412.
26 Cleare AJ, Blair D, Chambers S, Wessely S: Urinary free cortisol in chronic fatigue syndrome. Am J Psychiatry 2001;158:641–643.
27 Kanner AD, Coyne JC, Schaefer C, Lazarus RS: Comparison of two modes of stress measurement: Daily hassles and uplifts versus major life events. J Behav Med 1981;4:1–39.
28 Dailey PA, Bishop GD, Russell JI, Fletcher EM: Psychological stress and the fibrositis/fibromyalgia syndrome. J Rheumatol 1990;17;1380–1385.
29 Uveges JM, Parker JC, Smarr KL, McGowan JF, Lyon MG, Irvin MG, Meyer AA, Buckelew SP, Morgan RK, Delmonico RL, Hewett JE, Kay DR: Psychological symptoms in primary fibromyalgia syndrome: Relationship to pain, life stress, and sleep disturbance. Arthritis Rheum 1990;33:1279–1283.
30 Fukuda K, Straus S, Hickie I, Sharpe M, Dobbins J, Komaroff A: The chronic fatigue syndrome: A comprehensive approach to its definition and study. International Chronic Fatigue Syndrome Study Group. Ann Intern Med 1994;121:953–959.
31 Wolfe F, Smythe HA, Yunus MB, Bennett RM, Bombardier C, Goldenberg DL, Tugwell P, Campbell SM, Abeles M, Clark P, et al: The American College of Rheumatology 1990 Criteria for the Classification of Fibromyalgia: Report of the Multicenter Criteria Committee. Arthritis Rheum 1990;33:160–172.
32 Vingerhoets AJJM, van Tilburg MAL: Alledaagse problemenlijst. Lisse, Swets & Zeitlinger, 1994.
33 Beck AT: Depression: Causes and Treatment. Philadelphia, University of Pennsylvania Press, 1972.
34 Van der Ploeg HM, Defares PB, Spielberger CD: Handleiding bij de Zelfbeoordelingsvragenlijst. Een Nederlandstalige bewerking van de Spielberger State-Trait Anxiety Inventory. Lisse, Swets & Zeilinger, 1980.
35 SAS Institute Inc: SAS for Windows, version 6.12. Cary, SAS Institute, 1996.
36 Siegel S, Castellan NJ Jr: Nonparametric statistics for the behavioral sciences, ed 2. New York, McGraw-Hill, 1988.
37 Van Houdenhove B, Vasquez G, Neerinckx E: Tender points or tender patients? The value of the psychiatric in-depth interview for assessing and understanding psychopathological aspects of fibromyalgia. Clin Rheumatol 1994;13:470–474.
38 Gaston-Johansson F, Gustafsson M, Felldin R, Sanne H: A comparative study of feelings, attitudes and behaviors of patients with fibromyalgia and rheumatoid arthritis. Soc Sci Med 1990;32:941–947.
39 Johnson M, Paananen ML, Rahinantti P, Hannonen P: Depressed fibromyalgia patients are equipped with an emphatic competence-dependent self-esteem. Clin Rheumatol 1997;16:578–584.
40 Powell R, Dolan R, Wessely S: Attributions and self-esteem in depression and chronic fatigue syndromes. J Psychosom Res 1990;34:665–673.
41 Fry AM, Martin M: Fatigue in the chronic fatigue syndrome: A cognitive phenomenon. J Psychosom Res 1996;41:415–426.
42 White C, Schweitzer R: The role of personality in the development and perpetuation of chronic fatigue syndrome. J Psychosom Res 2000;48:515–524.
43 Prins JB, Bleijenberg G, Bazelmans E, Elving LD, de Boo TM, Severens JL, van der Wilt GJ, Spinhoven P, van der Meer JWM: Cognitive behaviour therapy for chronic fatigue syndrome: A multicentre randomized controlled trial. Lancet 2001;257:841–847.
44 Bennett RM: Multidisciplinary group programs to treat fibromyalgia. Rheum Dis Clins North Am 1996;22:351–367.
45 Kroenke K, Swindle R: Cognitive-behavioral therapy for somatization and symptom syndromes: A critical review of controlled clinical trials. Psychother Psychosom 2000;69:205–215.
46 Söderberg S, Evengard B: Short-term group therapy for patients with chronic fatigue syndrome. Psychother Psychosom 2001;70:108–111.
47 Cuykx V, Van Houdenhove B, Neerinckx E: Childhood abuse, personality disorder and chronic fatigue syndrome. Gen Hosp Psychiatry 1998;20:382–384.